



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the **PATENT APPLICATION** of:

Becker et al.

Application No.: 10/519,589

Filed: December 28, 2004

For: PUMP COMPRISING A SHIELD VALVE
CONTROLLED BY THE CONVEYING
MEDIUM

Group: Not Yet Known

Examiner: Not Yet Known

Our File: SMB-PT123

(PC 03 200 B US)

Date: March 16, 2005

**COMMUNICATION RE: INTERNATIONAL
PRELIMINARY EXAMINATION REPORT**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Enclosed is an English language version of the International Preliminary Examination Report related to the above-referenced 35 U.S.C. §371 National Phase Application based on PCT/EP2003/005044. It is noted that all claims in the International Preliminary Examination Report were indicated as meeting the PCT requirements with respect to novelty, inventive step (non-obviousness) and industrial applicability.

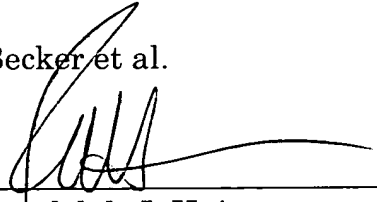
Applicant: Becker et al.
Application No.: 10/519,589

Prompt examination of the present application is respectfully requested.

Respectfully submitted,

Becker et al.

By



Randolph J. Huis
Registration No. 34,626
(215) 568-6400

Volpe and Koenig, P.C.
United Plaza, Suite 1600
30 South 17th Street
Philadelphia, PA 19103

RJH/dmm
Enclosure

PATENT COOPERATION TREATY

PCT/EP2003/005044



Translation

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference PC 03 200 B	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/EP2003/005044	International filing date (day/month/year) 14 May 2003 (14.05.2003)	Priority date (day/month/year) 22 July 2002 (22.07.2002)
International Patent Classification (IPC) or national classification and IPC F04B 53/10		
Applicant KNF NEUBERGER GMBH		

<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>4</u> sheets, including this cover sheet.</p> <p><input checked="" type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of <u>10</u> sheets.</p>	
<p>3. This report contains indications relating to the following items:</p> <p>I <input checked="" type="checkbox"/> Basis of the report</p> <p>II <input type="checkbox"/> Priority</p> <p>III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p>IV <input type="checkbox"/> Lack of unity of invention</p> <p>V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p>VI <input type="checkbox"/> Certain documents cited</p> <p>VII <input type="checkbox"/> Certain defects in the international application</p> <p>VIII <input type="checkbox"/> Certain observations on the international application</p>	

Date of submission of the demand 09 September 2003 (09.09.2003)	Date of completion of this report 04 June 2004 (04.06.2004)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/EP2003/005044

I. Basis of the report

1. With regard to the elements of the international application:*

- ☐ the international application as originally filed
- ☒ the description:
 pages _____, as originally filed
 pages _____, filed with the demand
 pages 1-8 _____, filed with the letter of 19 April 2004 (19.04.2004)
- ☒ the claims:
 pages _____, as originally filed
 pages _____, as amended (together with any statement under Article 19
 pages _____, filed with the demand
 pages 1-6 _____, filed with the letter of 19 April 2004 (19.04.2004)
- ☒ the drawings:
 pages 1/3-3/3 _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☐ the sequence listing part of the description:
 pages _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/fig _____

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/EP 03/05044

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-6	YES
	Claims		NO
Inventive step (IS)	Claims	1-6	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-6	YES
	Claims		NO

2. Citations and explanations

1. Document EP 1 126 173 A1 (D1), which is considered to represent the closest prior art, discloses a pump with at least one shield valve controlled by the conveying medium, the valve having a valve disk made of a flexible material clamped in a central region and movable between an open position and a closed position in which the valve disk closes at least one valve opening.

The subject matter of independent claim 1 differs from the pump in document D1 in that fin-shaped, integrally formed portions on the valve disk protrude over the peripheral edge of the latter and in that the valve disk is connected by at least one of the fin-shaped portions to a sealing ring that surrounds the valve disk and is clamped between two housing parts.

The technical problem to be solved by these distinguishing features is that of designing a pump whose valve device is distinguished in that it produces comparatively little noise.

The solution defined by the combination of features

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/EP 03/05044

in claim 1 is not known from any of the documents cited in the international search report. Valve disks having fin-shaped portions (for example, annular portions) are known from the prior art, but the fin-shaped portions are located at the flat sealing and/or support sides of the valve disks, not at their peripheral edges. Moreover, a valve disk sealing ring clamped in the pump housing is not known from the cited prior art. The subject matter of claim 1 is therefore not obvious from the prior art and appears to be novel and inventive within the meaning of the PCT.

2. Dependent claims 2-6 refer back to the pump defined in claim 1 and therefore also appear to be novel and inventive within the meaning of the PCT.
3. The pump defined in claims 1-6 appears to be industrially applicable within the meaning of the PCT because it can be produced, used or sold in industry, for example.